



People with Chronic Conditions

Provided by the Wisconsin Information for State Health Policy Program, a program funded by the Division of Health and the Robert Wood Johnson Foundation.

Comments and suggestions on improving the profiles may be addressed to:

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FOREWORD

Community Health Profiles: People with Chronic Conditions is the third in a series of three subject-specific profiles. These profiles were developed to provide information that will contribute to the appropriate use of long-term care services for people with chronic conditions. The first profile in the series is about pregnant women and infants; the second is about children.

The profiles evolved from a series of discussions, begun in 1992, between decision-makers in Wisconsin who met to identify key health policy issues for which information was needed. The Wisconsin Information for State Health Policy Program (InfoSHPP), which seeks to improve the availability and usefulness of health information for policy-makers in the state, was an outgrowth of those discussions.

During the early phases of InfoSHPP, local communities were recognized as the primary arenas for implementing an effective long-term care system. In response, profiles to address the need for local information were developed for 89 distinct geographical areas of the state:

- each Wisconsin county;
- each of Wisconsin's five largest cities (Kenosha, Madison, Milwaukee, Racine, and Green Bay);
- a selected group of zip codes in the city of Milwaukee;
- the five Division of Health regions; and for the state as a whole.

This profile includes information about chronic conditions (defined by selected diagnoses) which program and policy decision-makers identified as high priority. These diagnoses and the associated International Classification of Disease--Ninth Revision disease codes are listed in the Technical Notes.

Community Health Profiles: People with Chronic Conditions makes a special contribution to local health information by providing:

- a focus on the specific topic of chronic health conditions;
- information in a user-friendly format;
- information from a variety of data sources, including both population-based and program participant information;
- a narrative highlighting related *statewide* information for each table and graph;
- graphs for comparable statewide, regional and local information (statewide and regional information is shown, even when numbers are too small to present for local areas);
- comparisons between actual and expected values, based on statewide rates, for selected health measures.

Many people contributed their time and ideas through a collaborative planning process to produce these profiles. Special acknowledgment goes to the chronic conditions work group formed in connection with the Information for State Health Policy Program; the Chronic Disease Section, Bureau of Public Health, and the Bureau of Health Care Financing, Division of Health; the Bureau on Aging and the Bureau of Long-Term Support, Division of Supportive Living; the Bureau of Management and Operations, Division of Children and Family Services; the Demographic Services Center, Department of Administration; and the Office of Health Care Information, Office of the Commissioner of Insurance.

The profiles were prepared in the Center for Health Statistics. Bernie Tennis was lead research analyst for the profiles; he had primary responsibility for the content, gathering and summarizing of the data. Angela Bethel performed technical production of the profiles, including creating the tables and graphics and importing the data. Patricia Nametz provided editing and review of the profiles. Patricia Guhleman, InfoSHPP Program Coordinator, provided consultation in all phases of production. Chris Miller proofread the final reports.

The following individuals provided data and expertise: Robert Adler for data from the U.S. Census; Eleanor Cautley and Fred Krantz for data from the Family Health Survey and Behavioral Risk Factor Survey; Laura Owens for data from the hospital inpatient files; Yiwu Zhang for Home Health Survey data; Victor Jesudason for Nursing Home Survey data; Richard Betz for Community Options Program (COP), Medicaid (MA) Waiver, and Community-Based Residential Facility (CBRF) data; Laura Stevenson-Vine for Cancer Reporting System data; Ed Seiser for CBRF data; and Dan Spencer for Medicaid data.

Your comments and suggestions on improving the profiles are appreciated. Please direct them to Bernie Tennis (608-267-9090 or tennib@dhfs.state.wi.us) or Patricia Guhleman (608-267-5221 or guhlepa@dhfs.state.wi.us) at the Center for Health Statistics. On the Internet, go to: **<http://www.dhfs.state.wi.us/>** for instructions about accessing the profiles.

Requests for additional profiles should be addressed to:

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DEMOGRAPHICS

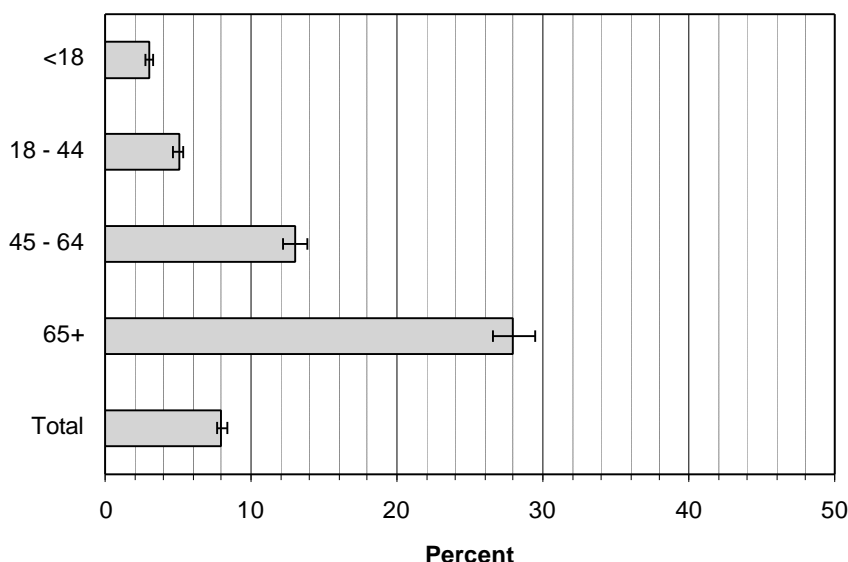
Table 1. Population by Age, 1990 and Selected Years

Age	1990	% Female	1994	2000	2010
<18	1,292,270	49%	1,344,420	1,356,251	1,289,521
18-34	1,336,148	50	1,255,230	1,214,766	1,272,682
35-44	723,097	50	816,700	834,266	681,166
45-54	476,937	51	569,940	728,900	821,494
55-64	413,161	52	411,790	463,655	694,695
65-74	358,566	55	363,680	349,743	395,354
75-84	218,100	62	236,180	242,714	240,869
85+	73,490	72	83,620	97,530	116,532
Total	4,891,769	51%	5,081,560	5,287,825	5,512,313

Source: 1990 data are from the U.S. Census of Population and Housing, Modified Age-Race-Sex (MARS) file. 1994 estimates are from the Wisconsin Center for Health Statistics. Projections for 2000 and 2010 are from the Demographic Services Center, Wisconsin Department of Administration.

Statewide, the number of people age 55 and over is expected to increase by one-third during the 20-year interval from 1990 to 2010.

HEALTH STATUS

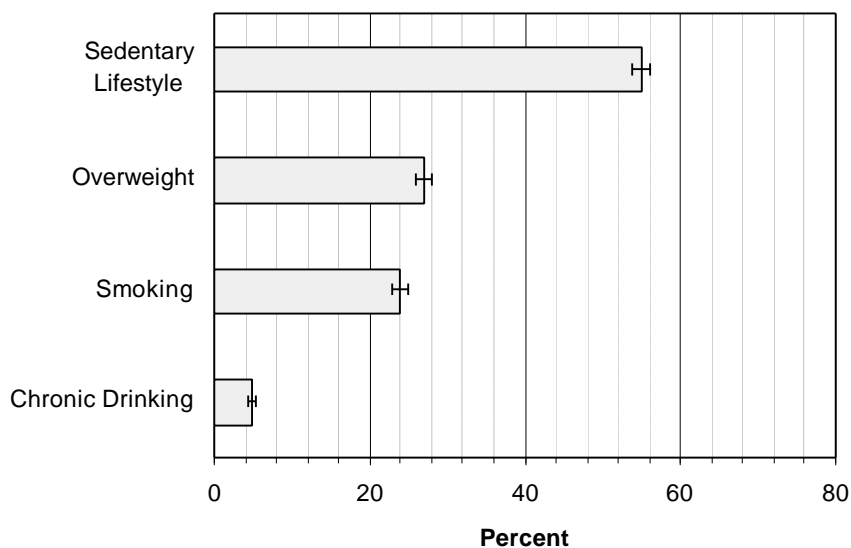
Figure 1. Percent of Persons with Fair or Poor Health

Source: Family Health Survey, 1990-1994 combined data, Center for Health Statistics.

Note: Range indicated on each bar represents a 95% confidence interval (see Technical Notes).

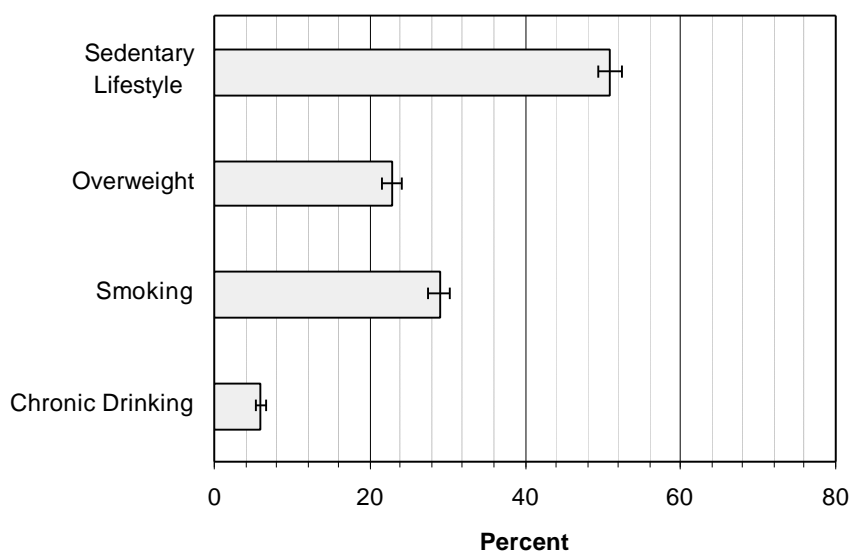
Older people are more likely than younger people to perceive their health as fair or poor. Statewide, about 28 percent of older people (age 65 and over) perceive their health as either fair or poor, compared with about 13 percent of people ages 45-64.

Figure 2a. Percent of Persons with Selected Behavioral Risks, Ages 18 and Older



About half of Wisconsin adults engage in little or no leisure-time physical activity (sedentary lifestyle), making this the most prevalent behavioral risk to health.

Figure 2b. Percent of Persons with Selected Behavioral Risks, Ages 18-44

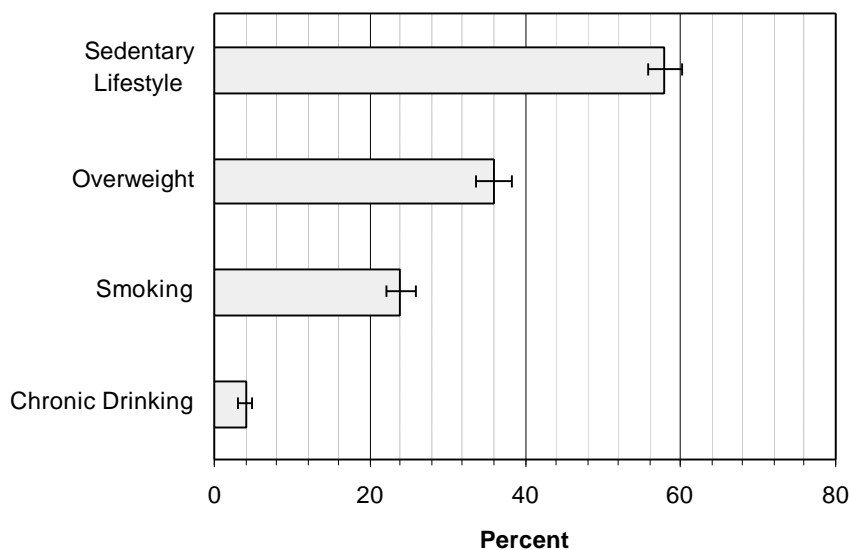


For people ages 18-44, sedentary lifestyle ranks first in statewide prevalence of behavioral risks to health; smoking cigarettes constitutes the second most common behavioral risk.

Source: Wisconsin Behavioral Risk Factor Survey, 1990-1994 combined data for all indicators except "sedentary lifestyle" (1989-1992, 1994), Center for Health Statistics.

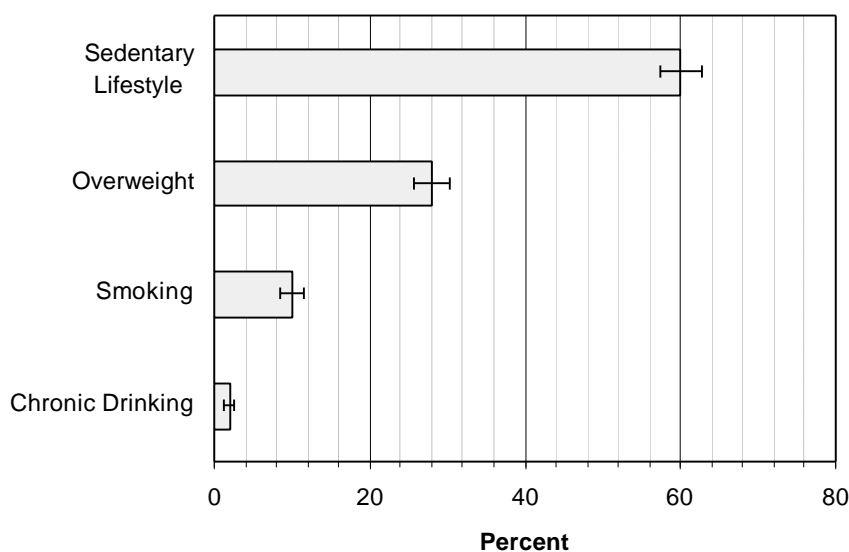
Note: See Technical Notes for definitions of behavioral risks. Range indicated on each bar represents a 95% confidence interval (see Technical Notes).

Figure 2c. Percent of Persons with Selected Behavioral Risks, Ages 45-64



Among middle-aged people (ages 45-64), being overweight represents the second leading behavioral risk (about 36 percent statewide), and smoking ranks third (24 percent).

Figure 2d. Percent of Persons with Selected Behavioral Risks, Ages 65 and Older



Statewide, sedentary lifestyle and being overweight represent the most prevalent behavioral risks to people age 65 and over (about 60 percent and 28 percent, respectively).

Source: Wisconsin Behavioral Risk Factor Survey, 1990-1994 combined data for all indicators except "sedentary lifestyle" (1989-1992, 1994), Center for Health Statistics.

Note: See Technical Notes for definitions of behavioral risks. Range indicated on each bar represents a 95% confidence interval (see Technical Notes).

Table 2a. Percent of Persons Reported to Have Selected Chronic Conditions, All Ages

Chronic Condition	State Percent
Cancer	3
Diabetes	3
Hypertension	11
Coronary Heart Disease	4
Heart Attack	2
Stroke	1
Asthma	8
Emphysema or Chronic Bronchitis	3
Arthritis	11
Any of the above	30

In Wisconsin, about 30 percent of all people report at least one chronic health condition, with arthritis and hypertension (high blood pressure) being the most frequently named conditions.

Table 2b. Percent of Persons Reported to Have Selected Chronic Conditions, by Age Groups

Chronic Condition	<65 State Percent	65+ State Percent
Cancer	2	13
Diabetes	2	11
Hypertension	8	41
Coronary Heart Disease	2	21
Heart Attack	1	10
Stroke	0	6
Asthma	8	8
Emphysema or Chronic Bronchitis	2	7
Arthritis	7	45
Any of the above	24	78

Statewide, about one-fourth of all people under age 65 report at least one chronic health condition, compared with more than three-fourths of all people age 65 and over.

Source: Family Health Survey, 1990-1994 combined data, Center for Health Statistics.

Note: Percent is based on persons who have ever been told by a doctor they have the listed condition.

Table 3. New Cancer Cases by Site

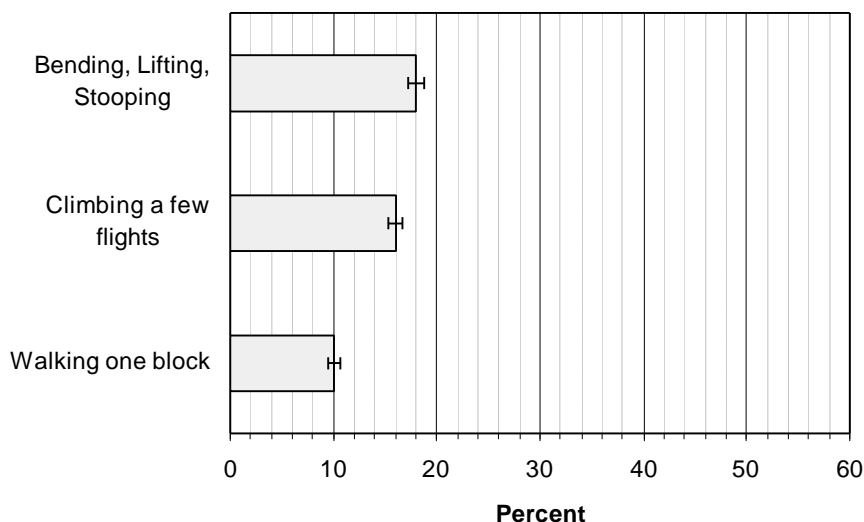
Primary Site	Annual Average 1989-1993	1994
		Actual
Females		
Breast	3,614	3,490
Colorectal	1,611	1,491
Lung, Trachea & Bronchus	1,126	1,222
Cervical	1,024	894
Other Sites	4,700	4,658
All Sites	12,075	11,755
Males		
Colorectal	1,699	1,592
Lung, Trachea & Bronchus	1,941	1,847
Prostate	3,733	3,614
Other Sites	5,046	4,903
All Sites	12,419	11,956
Total		
Colorectal	3,310	3,083
Lung, Trachea & Bronchus	3,067	3,069
Other Sites	18,117	17,559
All Sites	24,494	23,711

Source: Wisconsin Cancer Reporting System, Center for Health Statistics.

Statewide, breast cancer accounted for about one-fourth of newly reported cancers among Wisconsin women in 1994. Prostate cancer represented about 30 percent of reported cancer incidence among men.

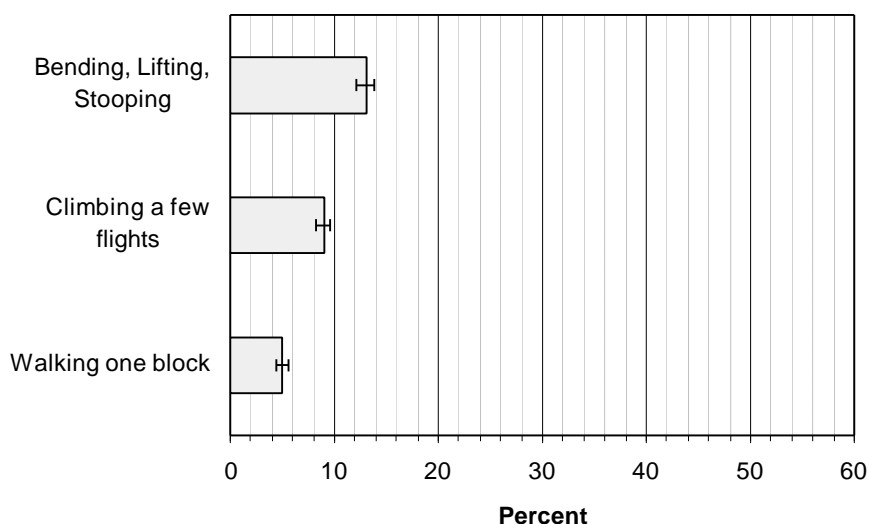
Lung cancer and colorectal cancer each accounted for 13 percent of total cancer incidence in 1994.

Figure 3a. Percent of Persons with Reported Limitations in Physical Activity Due to a Health Condition, Age 45 and Older



Among all people age 45 and over in Wisconsin, a health condition limits physical bending, lifting or stooping for about 18 percent; climbing two flights of stairs for about 16 percent; and walking one block for about 10 percent.

Figure 3b. Percent of Persons with Reported Limitations in Physical Activity Due to a Health Condition, Ages 45-64

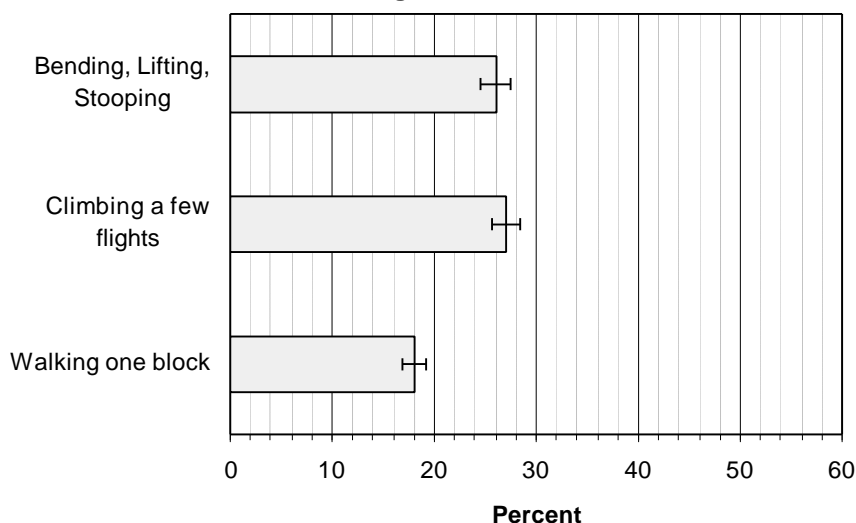


Among people ages 45-64, about 13 percent statewide indicate a limitation in bending, lifting or stooping due to a health condition.

Source: Family Health Survey, 1990-1994 combined data, Center for Health Statistics.

Note: Percent is the proportion of adults whose health limits them in performing the listed activity. Range indicated on each bar represents a 95% confidence interval (see Technical Notes).

Figure 3c. Percent of Persons with Reported Limitations in Physical Activity Due to a Health Condition, Age 65 and Older



Statewide, more than one-fourth of people age 65 and over face physical limitations in climbing stairs (about 27 percent) or bending, lifting, or stooping (about 26 percent).

Source: Family Health Survey, 1990-1994 combined data, Center for Health Statistics.

Note: Percent is the proportion of adults whose health limits them in performing the listed activity. Range indicated on each bar represents a 95% confidence interval (see Technical Notes).

USE OF SERVICES

Table 4. Number of Home Health Recipients with Chronic Conditions, 1994

Age	Develop. or Phys. Disability	Mental Illness	CNS Disorder	Other Chronic Condition
<55	1,449	460	606	2,745
55-64	193	131	190	2,382
65-74	139	282	202	6,163
75+	132	781	387	11,923
Age unavailable	6	5	24	212
Total	1,919	1,659	1,409	23,425

Source: Wisconsin Annual Survey of Home Health Agencies, Center for Health Statistics.

Note: This table provides unduplicated counts for 1994 of home health agency patients with chronic conditions; that is, patients whose primary diagnosis was a developmental or physical disability; a mental illness; a central nervous system (CNS) disorder, such as multiple sclerosis; or some other chronic condition. See Technical Notes for more detail about these categories..

A chronic condition represented the primary diagnosis for about 29,000 clients of Wisconsin home health agencies in 1994.

Table 5. Number of Residents of Skilled Nursing Facilities (SNFs) on December 31, 1994

Age	Develop. Disability	Mental Illness	Physical Disability	All Others
<65	224	678	122	1,680
65-74	117	1,472	128	3,325
75-84	83	3,951	189	10,152
85+	23	5,052	140	16,716
Total	447	11,153	579	31,873

Source: Wisconsin Annual Survey of Nursing Homes, Center for Health Statistics.

Note: SNFs are nursing homes licensed to provide medical care needed to restore residents to their rehabilitation potential. This table reflects an unduplicated count of all SNF residents. All SNF residents (regardless of diagnosis) are included in this table. See Technical Notes for detail about the diagnostic categories.

In 1994, about half of all residents of Wisconsin skilled nursing facilities (SNFs) were age 85 or older.

Table 6. Number of Persons Enrolled in the Community Options Program (COP) and Medicaid Waiver Programs in 1994

Age	Frail Elderly	Develop. Disability	Mental Illness	Physical Disability	Other
<18	0	471	60	16	12
18-44	0	2,861	977	569	40
45-54	0	737	672	246	27
55-64	0	399	950	208	30
65-74	2,888	0	0	0	0
75-84	3,642	0	0	0	0
85+	2,462	0	0	0	0
Total	8,992	4,468	2,659	1,039	109

Source: Wisconsin Human Services Reporting System.

Note: This table provides unduplicated counts of all persons enrolled in the COP and Medicaid waiver programs (CIP2, COP-W, CIP1A, CIP1B, CSLA), which are state-supervised and county-administered programs that provide community-based services to nursing-home-eligible persons. See Technical Notes for more detail about the diagnostic categories.

Statewide, about 18,000 people were enrolled in the Community Options Program or Medicaid waiver programs in 1994; about half the enrollees were under age 65.

Table 7. Number of Publicly-Funded Residents of Community-Based Residential Facilities (CBRFs) in 1994

Age	Develop. Disability	Mental Illness	Physical Disability	AODA	Other
18-44	1,216	967	50	1,362	415
45-64	581	429	78	281	121
65-74	139	130	20	43	319
75-84	25	42	2	10	638
85+	9	4	5	3	513
Total	1,970	1,572	155	1,699	2,006

Source: Wisconsin Human Services Reporting System.

Note: A CBRF is a home or facility where three or more adults live and receive supportive services in daily living, care, treatment, or protective services beyond room and board; CBRF services may not include nursing care on a permanent basis. This table provides unduplicated counts of persons whose residence in a CBRF in 1994 was publicly funded. (No counts of private-pay CBRF residents are available.). Fifty-two residents statewide were reported to be under 18 years of age, and were not included in this table. See Technical Notes for more detail about the resident categories.

Statewide, mental illness constituted the most prevalent primary diagnosis among residents with public funding in community-based residential facilities in 1994.

Table 8. Number of Residents of Facilities for the Developmentally Disabled (FDDs) on December 31, Selected Years

	1990	1992	1994
Total	3,885	3,691	3,430

Source: Wisconsin Annual Survey of Nursing Homes, Center for Health Statistics.

Note: FDDs are nursing homes licensed to provide active treatment and services to residents who are developmentally disabled, primarily due to mental retardation or cerebral palsy. This table reflects an unduplicated count of all FDD residents each year on December 31.

Statewide, there were about 3,400 residents in facilities for the developmentally disabled in 1994, nearly 500 fewer than in 1990.

Table 9. Number of Hospitalizations for Selected Chronic Conditions, by Age, 1994

Chronic Conditions	<18	18-44	45-64	65-74	75+
AIDS/HIV	8	89	18	1	1
Cancer					
Breast	0	347	989	691	625
Colorectal	0	78	629	812	1,166
Lung, Trachea, & Bronchus	0	57	668	756	507
Cervical	0	110	93	28	23
Prostate	2	3	712	876	510
Other Cancers	452	3,929	5,989	4,178	4,148
Diabetes	432	1,683	1,812	1,246	1,292
Mental Illness					
Affective Disorders	2,005	7,074	2,353	914	885
Schizophrenias/Psychoses	90	3,481	1,115	233	183
Anxiety/Char Dis Inc	791	1,835	463	196	301
Depresn					
Dementias	2	26	113	335	1,438
Alcohol and Other Drug Abuse	762	7,962	1,244	210	92
Other Mental Illness	981	528	33	2	0
Paralysis & Cerebral Palsy	33	54	33	36	40
Hypertension	9	155	240	173	222
Congestive Heart Failure	33	332	2,368	4,005	8,804
Coronary Heart Disease	1	1,576	10,879	9,485	9,150
Stroke	38	513	2,629	4,026	7,423
Asthma	2,359	1,772	900	494	501
Other Chronic Lung Disease	99	307	1,500	2,174	2,457
Liver Disease/Cirrhosis	5	307	433	219	119
Other Chronic Condition	1,430	8,444	8,779	6,926	7,001
Total Hospitalizations for Chronic Conditions	9,532	40,662	43,992	38,016	46,888
Total Hospitalizations	113,645	184,739	103,550	83,993	116,433

Source: Office of Health Care Information, hospital inpatient database.

Note: Data are based on the principal diagnosis only. Conditions shown tend to be associated with long-term involvement with the health care system. See Technical Notes for the ICD-9-CM codes of these conditions.

Corrections to Mental Illness categories made January, 1998

Statewide, a chronic condition constituted the primary diagnosis for about 30 percent of the approximately 602,000 total hospitalizations in 1994.

Table 10. Hospitalizations for Selected Chronic Conditions

Chronic Condition	Annual Average 1989-1993	1994
		Actual
AIDS/HIV	134	117
Cancer		
Breast	3,014	2,652
Colorectal	2,806	2,685
Lung, Trachea, & Bronchus	2,134	1,988
Cervical	225	254
Prostate	2,446	2,103
Other Cancers	20,360	18,696
Diabetes	5,862	6,465
Mental Illness		
Affective Disorders	11,265	13,231
Schizophrenias/Psychoses	5,018	5,102
Anxiety/Char Dis Inc Deprsn	4,032	3,586
Dementias	1,516	1,914
Alcohol and Other Drug Abuse	11,071	10,270
Other Mental Illness	1,541	1,544
Paralysis & Cerebral Palsy	265	196
Hypertension	804	799
Congestive Heart Failure	15,232	15,542
Coronary Heart Disease	32,369	31,091
Stroke	14,001	14,629
Asthma	6,582	6,026
Other Chronic Lung Disease	4,348	6,537
Liver Disease/Cirrhosis	1,046	1,083
Other Chronic Conditions	33,863	32,580
Total Hospitalizations for Chronic Conditions	179,934	179,090

Source: Office of Health Care Information, hospital inpatient database.

Note: Data are based on the principal diagnosis only. Conditions shown tend to be associated with long-term involvement with the health care system. See Technical Notes for the ICD-9-CM codes of these conditions.

Coronary heart disease, congestive heart failure, stroke, cancer and chronic lung disease accounted for more than half of all 1994 Wisconsin hospitalizations for which a chronic condition constituted the primary diagnosis.

Corrections to Mental Illness categories made January, 1998

Table 11. Hospitalizations for a Chronic Condition with a Secondary Diagnosis of Diabetes, by Principal Diagnosis, 1994

Principal Diagnosis	<55	55-74	75+	Total
Mental Illness	567	460	336	1,363
Coronary Heart Disease	1,062	3,817	1,861	6,740
Stroke	224	1,519	1,329	3,072
Chronic Lung Disease	228	614	366	1,208
Other Chronic Condition	1,893	6,148	3,987	12,028
Total	3,974	12,558	7,879	24,411

Source: Office of Health Care Information, hospital inpatient database.

Note: This table presents only those hospitalizations with a secondary diagnosis of diabetes for which the principal diagnosis was one of the selected chronic conditions examined. Diabetes is also associated with hospitalizations for complications not shown here, such as limb amputations and kidney failure.

About 14 percent of all hospitalizations for a chronic condition included a secondary diagnosis of diabetes.

Table 12. Medicaid-Reimbursed Health Services for People with Chronic Conditions, 1994

Services	Number of Recipients	Payment (in thousands)
Hospitalizations - Inpatient	44,706	\$218,992
Hospitalizations- Outpatient	97,217	50,043
Nursing Home	43,773	859,034
Physician	177,593	77,996
Pharmacy	177,594	149,780
Home Care	12,055	77,610
Mental Health	41,056	20,495
Therapies	16,097	17,979
Other	174,639	121,738
Total	196,590	\$1,593,668

Source: Medicaid Claims, Bureau of Health Care Financing.

Note: The counts in this table do not include any services provided by an HMO. "Therapies" include physical therapy, occupational therapy, speech and hearing therapy, group therapy, and comprehensive outpatient therapy provided by rehabilitation agencies. "Other" includes emergency room, durable medical equipment, lab and X-ray, dental, transportation, HealthCheck, and all other Medicaid services. See Technical Notes for list of chronic conditions and their ICD-9-CM codes.

Statewide, Medicaid paid about \$1.6 billion for services to people with chronic health conditions in 1994.

MORTALITY**Table 13. Mortality Attributed to Selected Chronic Conditions, 1994**

Chronic Condition	<45	45-64	65-74	75+
HIV/AIDS	162	41	2	0
Cancer				
Breast	54	269	223	340
Colorectal	29	208	302	602
Lung, Trachea, & Bronchus	39	670	861	902
Cervical	22	24	16	12
Prostate	1	58	190	563
Diabetes	31	177	290	583
Congestive Heart Failure	5	48	122	954
Coronary Heart Disease	153	1,274	2,154	7,054
Stroke	62	246	506	2,696
Chronic Lung Disease	21	208	574	1,305
Liver Disease/Cirrhosis	42	137	86	72
Total (Chronic Conditions)	621	3,360	5,326	15,083
Total (All Deaths)	3,328	6,071	8,751	26,270

Source: Resident death certificates, Center for Health Statistics.

Note: This table reflects the underlying cause of death. Several conditions may be cited on the death certificate; one is selected using criteria established by the National Center for Health Statistics as the "underlying cause of death," that is, "the disease or injury which initiated the chain of events leading directly or indirectly to death." See Technical Notes for ICD-9-CM codes.

In 1994, chronic conditions accounted for about half (24,390) of all Wisconsin deaths.

Table 14. Mortality for Selected Chronic Conditions

Chronic Condition	Annual Average 1989-1993	1994
		Actual
HIV/AIDS	160	205
Cancer		
Breast	903	886
Colorectal	1,180	1,141
Lung, Trachea, & Bronchus	2,441	2,472
Cervical	70	74
Prostate	771	812
Diabetes	1,056	1,081
Congestive Heart Failure	997	1,129
Coronary Heart Disease	11,240	10,635
Stroke	3,305	3,510
Chronic Lung Disease	1,835	2,108
Liver Disease/Cirrhosis	374	337
Total	24,332	24,390

Source: Resident death certificates, Center for Health Statistics.

Note: This table reflects the underlying cause of death (see note, Table 13).

Statewide, coronary heart disease represented the leading cause of death due to a chronic health condition in 1994.

Technical Notes

The regions used in this report reflect the uniform Department of Health and Family Services boundaries which became effective July 1996.

A blank column in a table and the absence of a bar in a figure indicate either that data are not available for a given geographic level, or that a stable estimate could not be calculated.

Chronic Conditions. As defined in *Chronic Disease Epidemiology and Control* (American Public Health Association, 1993), chronic conditions are those that have a prolonged course, that do not resolve spontaneously, and for which a complete cure is seldom achieved. These conditions are generally characterized by uncertain etiology, multiple risk factors, a long latency period, a prolonged course of illness, non-contagious origin, and functional impairment or disability. The conditions analyzed in this profile include the following diagnoses and their ICD-9-CM codes:

- HIV (042-044)
- Cancer (140-239)
 - Breast (174-175)
 - Cervical (180)
 - Colorectal (153-154)
 - Lung, Trachea, & Bronchus (162)
 - Prostate (185)
 - Leukemia (204-208)
 - Other (140-152, 155-161, 163-173, 176-179, 181-184, 186-203, 209-239)
- Diabetes (250)
- Mental Disorders
 - Dementias (290-290.43, 291.1, 291.2, 292.82, 292.83, 294.0, 294.1)
 - Alcohol and Other Drug Abuse (291.0, 291.3, 292.0, 292.11, 292.84, 303.90, 304-304.90, 305-305.90)
 - Schizophrenias / Psychoses (293.81, 293.82, 295.10-295.35, 295.60-295.95, 297.1-297.3)
 - Affective Disorders (293.83, 296.2-296.7)
 - Anxiety / Character and Miscellaneous Disorders (294.8, 294.9, 300.00-300.13, 301.00-301.82, 300.15-300.9, 301.84-301.9, 302.71-302.79, 306.51-307.0, 307.20, 307.21, 307.23-307.47, 307.80, 310.10, 780.52-780.54)
 - Other Chronic Mental Disorders (300.14, 301.83, 307.1, 307.50-307.51, 299.00, 299.80, 307.22, 307.23, 307.52-307.7, 312.00-312.23, 313.82, 314.00, 314.01, 315.9)
- Mental Retardation (317-319)
- Alzheimer's Disease (331.0)
- Parkinson's Disease (332)
- Multiple Sclerosis and Other Diseases of the Central Nervous System (320-330, 331.1-331.9, 333-341)
- Paralysis & Cerebral Palsy (342-344)
- Glaucoma (365)
- Cataracts (366)
- Congestive Heart Failure (428, 402.01, 402.11, 402.91)
- Hypertension (401, 402.00, 402.10, 402.90)
- Coronary Heart Disease (410-414, 429.2)
- Stroke (430-438)
- Liver Disease / Cirrhosis (571)
- Emphysema and Chronic Lung Disease (490-496, 500-504, 506, 507.8, 515-517), includes Asthma (493)
- Arthropathies, Dorsopathies, & Rheumatism (710-729), includes Arthritis (710-719)
- Osteopathies (730-739), includes Osteoporosis (733)

Family Health Survey. The Wisconsin Family Health Survey (FHS) is a statewide telephone survey using a stratified random sample of households in Wisconsin. One person in each household, who is most knowledgeable about the health of household members, answers the questions on behalf of all household members. Interviews are conducted each month of the year; a total of about 2,400 households are surveyed annually. Completed interviews are weighted to represent nonrespondents and to correct for disproportionate sampling rates across regions. The completed sample is considered to be representative of the Wisconsin household population, although it does not include any households without telephones and minority populations are somewhat underrepresented.

Confidence intervals. Figures using FHS data contain error bars at the end of each graph bar, indicating a 95% confidence interval. That is, there is a 95% chance that the actual percentage falls within the range indicated by the error bar. Tables 2a and 2b have a column labeled (+/-) that contains the 95% confidence interval associated with each county value.

Sample size. For all of the FHS analyses in this report, data from five years (1990-1994) were combined. This was done to provide more stable estimates at the county and regional levels for the age groups being considered. The confidence associated with estimates varies with the size of the sample used to produce the estimates. For example, estimates based on a sample of 200 might vary by as much as (plus or minus) 7 percent. In these profiles, FHS estimates are not available below the county level, except for the city of Milwaukee.

Behavioral Risk Factor Survey. The Wisconsin Behavioral Risk Factor Survey (BRFS) is a statewide telephone survey using a stratified random sample of households in Wisconsin. One adult is randomly selected from each household to be interviewed. Interviews are conducted each month of the year; a total of 1,500-2,100 households are surveyed annually. Completed interviews are weighted to represent nonrespondents and to correct for disproportionate sampling rates across regions. The completed sample is considered to be representative of the Wisconsin household population, although it does not include any households without telephones and minority populations are somewhat underrepresented.

Confidence intervals. See above discussion of confidence intervals.

Definition of behavioral risks. Figures 2a-2d show four health risks: (1) Sedentary lifestyle is defined by no leisure-time physical activity, or activities done for less than 20 minutes or fewer than 3 times per week. (2) Overweight is determined by a body mass index (weight in kilograms divided by height in meters squared) of 27.3 or greater for women and 27.8 or greater for men. (3) Smokers are those who smoke currently and have smoked more than 100 cigarettes in their lifetime. (4) Chronic drinkers are those who report consuming 60 or more drinks in the previous month. The Centers for Disease Control and Prevention defined these behavioral risk standards.

Sample size. Figures 2a-2d use combined data from five years of the survey to provide more stable estimates at the county and regional levels for the age groups being considered. Data from 1989-1992 and 1994 were used for sedentary lifestyle; 1990-1994 data were used for the other risks. The reader should be aware that the confidence associated with estimates varies with the size of the sample used to produce the estimates. For example, estimates based on a sample of 200 might vary by as much as (plus or minus) 7 percent. In these profiles, BRFs estimates are not available below the county level.

Cancer Reporting System. Table 3 is based on reported cancer cases from Wisconsin hospitals and clinics, out-of-state cancer registries, and Minnesota hospitals near the state border. Data are for Wisconsin residents only.

All malignant neoplasms (except basal cell carcinoma and squamous cell carcinoma which arise in the skin) are reportable to the Wisconsin Cancer Reporting System per state statute (255.04). Only newly diagnosed cases of primary tumor sites for a particular calendar year are included in the incidence count for that year.

The colorectal cancer group includes the following sites: colon, rectum, rectosigmoid junction, anus and anal canal.

Actual and Expected Values. Tables 3, 10 and 14 present actual and expected values for cancer incidence, hospitalizations and mortality, and indicate whether the differences are statistically significant. In this profile, the statewide age- and sex-specific rates for each event (i.e., site-specific cancer incidence, cause-specific hospitalizations and cause-specific mortality) are used as the “standard” against which each community is compared. CHS calculated the sex-specific rates for each chronic condition in five-year age increments, and applied these rates to the community’s population to produce an expected number of cases in the community.

Actual values are affected by the age and sex distributions within the community. For example, because the risk of cancer increases with age, a higher than average number of cancer cases is usually found in communities whose proportion of elderly is greater than the state’s. If the community is similar to the state in terms of age and sex distribution, a higher-than-expected number of cancer cases is probably due to factors other than age and sex.

The statistical test of significance indicates the probability that the difference did not occur by chance. In any statistical test, sample size can strongly influence the results. In large communities, smaller numerical differences may be statistically significant, whereas in smaller communities, large numerical differences might not meet the statistical test of significance. For this reason, the tests of significance should not be used to compare communities. Each community should evaluate both its actual and its expected values in developing intervention priorities.

Home Health Survey. The Wisconsin Home Health Survey is an annual survey of all home health agencies providing services to Wisconsin residents. Table 4 presents the number of patients reported, based on principal diagnosis. Diagnosis categories include slightly different groupings, depending on which survey form the agency used.

Category	Conditions and ICD-9-CM Diagnostic Codes
Developmental or Physical Disability	Mental Retardation (317-319), Paralysis and Cerebral Palsy (342-344)
Mental Illness and AODA	Senile Dementia (290), Mental Illness (291-302, 306-316) and Alcohol and Other Drug Abuse (303-305)
Central Nervous System	CNS disorders (320-341) or Multiple Sclerosis only (340-341)
Other Medical Conditions	HIV/AIDS (042-044), Cancer (140-239), Diabetes (250), Stroke (436-438), Respiratory Diseases (460-519) Arthropathies, Dorsopathies, and Rheumatism (710-729) or Arthritis (710-719) Osteopathies (730-739) or Bone Degeneration (730-733)

Nursing Home Survey. The Wisconsin Annual Survey of Nursing Homes is a survey of all facilities licensed to provide nursing care in Wisconsin. Patient counts in Table 5 present skilled nursing facility residents on December 31, 1994 by principal diagnosis.

Category	Conditions and ICD-9-CM Diagnostic Codes
Developmental Disabilities	Mental Retardation (317-319), Cerebral Palsy (343) Epilepsy (345), Autism (299), other developmental disabilities
Mental Disorders	Alzheimer's (331,290.1), Mental Illness (291-302, 306-316), Alcohol and Other Drug Abuse (303-305)
Physical Disabilities	Paraplegia (344.1-344.9), Quadriplegia (344), Hemiplegia (342)
Medical Conditions	Cancer (140-239), Fractures (800-839), Cardiovascular (390-429, 439-459), Cerebrovascular (430-438), Diabetes (250), Respiratory Diseases (460-519), and other medical conditions

Human Services Reporting System. The Wisconsin Human Services Reporting System (HSRS) tracks state-funded social services administered by counties. Community Option Program and Medicaid waiver clients are classified according to program requirements, which include assigning all clients over age 65 to the “frail elderly” category, meaning a fragile state of health related to multiple age-associated conditions. All other clients and community-based residential facility (CBRF) residents are categorized by primary diagnosis as follows:

Category	Condition and HSRS Code
Developmental Disabilities	DD codes 19, 23, 25, 26, 27, 28
Mental Illness	Mentally Ill (02), Chronically Mentally Ill (03), and Severely Emotionally Disturbed (86)
Physical Disabilities	Blind/Visually Impaired (07), Hearing Impaired (08), Physically Disabled/Mobility Impaired (09), Alzheimer’s (18)*, Other Physical Disability (38)
Other	All other clients

* COP and Waiver Programs only; does not apply to CBRF residents.

CBRF counts. CBRF data are unavailable for Burnett, Eau Claire, Iowa, Milwaukee, Monroe, Portage, Washburn, and Washington counties, and residents are significantly undercounted in Barron, Brown, Forest, Kenosha, Langlade, Lincoln, Manitowoc, Marathon, Oneida, Polk, Rusk, and Vilas counties. Residents are also slightly undercounted in Buffalo, Door, Douglas, Green, Juneau, Kewaunee, Marinette, Menominee, Oconto, Ozaukee, Racine, Richland, Sauk, and St. Croix counties. Regional and statewide CBRF residents are also undercounted.

Hospitalizations. The hospital findings presented in this profile are based on data extracted from each hospital's Uniform Billing Record (UB-82 or UB-92) and submitted to the Office of Health Care Information. The categories are defined by the chronic disease diagnosis codes listed on the first page of these Technical Notes. Unless otherwise noted, hospitalizations by cause reflect the first-listed diagnosis at discharge. Table 9 is based on all hospitalizations for chronic conditions of Wisconsin residents discharged in 1994. Table 10 is based on all such discharges from 1989 to 1994.

No data were available for Wisconsin residents hospitalized in other states. Caution is therefore advised when analyzing hospitalizations for residents of border counties. The counties most affected by this care pattern are: Ashland, Barron, Bayfield, Buffalo, Burnett, Douglas, Dunn, Florence, Grant, Iron, Marinette, Pepin, Pierce, Polk, St. Croix, and Washburn. If more complete data were available, the number of hospitalizations for residents of these counties would probably be higher.

Mortality. The conditions listed in Tables 13 and 14 are defined by the chronic disease diagnosis codes listed on the first page of these Technical Notes.